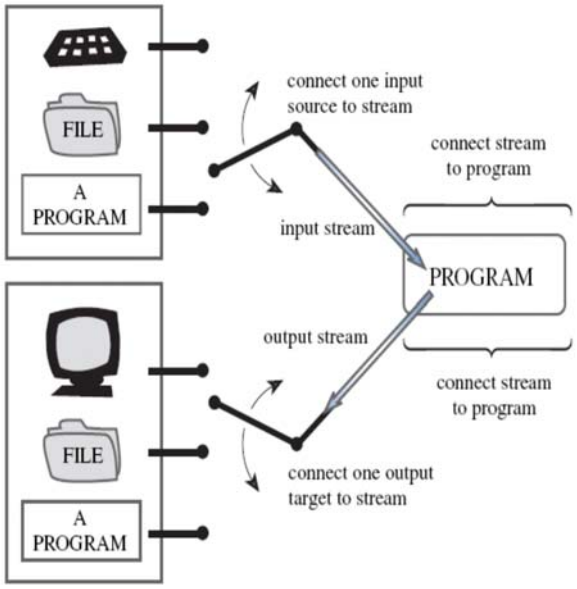
Chapter 8: IO Library

IO: Basic Concept

- **streams** - I/O uses the concept of *streams* - a flow of characters. *streams* may flow into or out of files or console. They can also flow into and out of strings. C++ tries to offer the same set of commands whatever the nature of the source and destination.



- **state** - Each stream has state information indicating whether an error has occurred, etc.
- **buffer** – Default is ok.
- **locale** - Default is ok.

IO Library

Table 8.1. IO Library Types and Headers

Header	Type
iostream	istream reads from a stream
	ostream writes to a stream
	iostream reads and writes a stream; derived from istream and ostream,
fstream	ifstream, reads from a file; derived from istream
	ofstream writes to a file; derived from ostream
	fstream, reads and writes a file; derived from iostream
sstream	istringstream reads from a string; derived from istream
	ostringstream writes to a string; derived from ostream
	stringstream reads and writes a string; derived from iostream

String Stream

- **In-memory input/output**: a stream is attached to a string within the program's memory.
- That string can be written to and read from using the iostream input and output operators.

Header	Type
sstream	istringstream reads from a string; derived from istream
	ostringstream writes to a string; derived from ostream
	stringstream reads and writes a string; derived from iostream

Sample usage, see note

Until Next Time

- Lab …
- First midterm starts at **6:00 pm** on Thurs, **October 16**, 2014.
- [Reading] Chapter 9.